

**BEST AVAILABLE COPY** Patent Application  
10/812,159

### REMARKS

Claims 1-8 are pending in the application. Claims 1 and 3, the only independent claims, have been amended herein, as have dependent Claims 5-7 to correct antecedent basis issues raised by the amendments to Claim 3.

Claims 1 and 2 were rejected under 35 USC 102(b/e) as being anticipated by US Patent 5,148,858 (Williams) or US Patent 5,981,344 (Hsieh et al.). Claims 3-6 and 8 were rejected under 35 USC 102(b/c) as being anticipated by Williams. Claim 7 was rejected under 35 USC 103(a) as being unpatentable over Williams.

In view of the foregoing amendments, the rejections are respectfully traversed and reconsideration is requested.

Applicant's Claim 1, as amended herein, is directed to a double diffused field effect transistor made in accordance with the method of providing a substrate of a first conductivity type, introducing at least two dopant species of said first conductivity type, but with different diffusivities, into a surface of the substrate so that the substrate has a nonuniform doping profile, forming an epitaxial layer of the first conductivity type over the substrate, forming one or more body regions of a second conductivity type within the epitaxial layer, forming a plurality of source regions of the first conductivity type within the body regions and forming a gate region adjacent to the one or more body regions, wherein the introducing step is performed prior to the step of forming an epitaxial layer.

Similarly, independent Claim 3 has been amended to recite a double diffused field effect transistor comprising a substrate of a first conductivity type, at least two dopant species of the first conductivity type, but with different diffusivities, incorporated into a surface of the substrate so that the substrate has a nonuniform doping profile, the nonuniform doping profile having a dopant concentration that is greatest at a given depth below a surface layer of the substrate and which decreases with increasing distance away from the given depth, an epitaxial layer of the first conductivity type located over the surface layer of the substrate, one or more body regions of a second conductivity type disposed within the epitaxial layer, a plurality of source regions of the first conductivity type located within the body regions, and a gate region adjacent to the one or more body regions.

**BEST AVAILABLE COPY** Patent Application  
102312,159

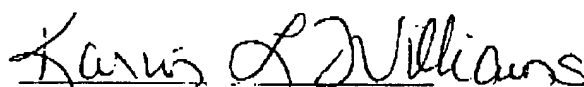
Neither Williams nor Hsieh teach or suggest a device having a substrate of a first conductivity type, at least two dopant species of the first conductivity type, but with different diffusivities, incorporated into a surface of the substrate so that the substrate has a nonuniform doping profile. Rather, Williams discusses only the use of a single implant (phosphorus) either in the substrate or in the epitaxial layer, and allowing it to diffuse toward the top surface to minimize on-resistance. Williams does *not* teach or suggest the "implantation of two dopant species, with different diffusivities."

For at least the foregoing reason, Applicant respectfully submits that of Williams and Hsieh fail to teach or suggest the method recited in independent Claims 1 and 3, as amended herein, and that the rejections should be withdrawn.

Dependent Claims 2 and 4-8 are believed to be clearly patentable for all of the reasons indicated above with respect to amended independent Claim 1 and 3, one or the other from which they depend, and even further distinguish over the cited reference by reciting additional distinguishing limitations.

Should the Examiner be of the view that an interview would expedite consideration of this Amendment, request is made that the Examiner telephone the Applicant's attorney at (908) 518-7700 in order that any outstanding issues be resolved.

Respectfully submitted,



Karin L. Williams

Registration No. 36,721

Please Continue to Send Correspondence to:

Mayer, Fortkort & Williams, PC  
251 North Avenue West, 2<sup>nd</sup> Floor  
Westfield, NJ 07090  
Phone: (908)-518-7700  
Fax: (908)-518-7795

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